

From boatanchors@theporch.com Tue Jan 30 12:33:42 1996
From: "S. Miller" <smiller@motown.ge.com>
Subject: 811A tubes, and 30L-1s
Message-ID: <199601301554.KAA01179@bear.MOTOWN.GE.COM>

I just got the Antique Electronic Supplies catalog and see that there are more flavors to 811's than there are to Ben & Jerrys. What's the story? For instance they show (just for Svetlana tubes) an 811A, and 811A-3 and an 811A-10. Then there is SOVTEK and Chinese tubes. They also show US made 811's but I think they list the price as "call" so that takes care of that. What's the right tube for the restoration of my 20 years in a Pennsylvania Dutch country barn 30L-1.
Thanks
Steve Kd2Ed
smiller@motown.ge.com

From boatanchors@theporch.com Tue Jan 30 12:33:42 1996
From: Peter Gerba <pgerba@crl.com>
Subject: Re: 811A tubes, and 30L-1s
Message-ID: <Pine.SUN.3.91.960130093316.13995A-100000@crl7.crl.com>

Hi Steve;

I have 4 Svetlanas in my 30L1. They worked well (in my case anyway) after a fashion...When I first installed the new tubes the output was low, about 500 watts on CW. After about 6 weeks of use the power level came up to 800 watts out on CW. I asked a friend at Eimac about this... " you cooked all the gas out of the tube, the Russians may have trouble with a little gas in their tubes". They now work up to par. One of the tubes in my rig is not as bright as the other 3. You may want to pay for a matched set.

Paul you may want to add to this.

pete
pgerba@crl.com

On Tue, 30 Jan 1996, S. Miller wrote:

> I just got the Antique Electronic Supplies catalog and see that
> there are more flavors to 811's than there are to Ben & Jerrys.
> What's the story? For instance they show (just for Svetlana
> tubes) an 811A, and 811A-3 and an 811A-10. Then there is SOVTEK and
> Chinese tubes. They also show US made 811's but I think they list the price as
> "call" so that takes care of that. What's the right tube

> for the restoration of my 20 years in a Pennsylvania Dutch country
> barn 30L-1.
> Thanks
> Steve Kd2Ed
> smiller@motown.ge.com
>

From boatanchors@theporch.com Tue Jan 30 19:16:11 1996
From: garland@MPS.OHIO-STATE.EDU (James C. Garland)
Subject: Re: 811A tubes, and 30L-1s
Message-ID: <01I0MN68TQIC8WXQIQ@MPS.OHIO-STATE.EDU>

>
>I have 4 Svetlanas in my 30L1. They worked well (in my case anyway) after a
>fashion...When I first installed the new tubes the output was low, about
>500 watts on CW. After about 6 weeks of use the power level came up to
>800 watts out on CW. I asked a friend at Eimac about this... " you
>cooked all the gas out of the tube, the Russians may have trouble with a
>little gas in their tubes". They now work up to par. One of the tubes
>in my rig is not as bright as the other 3. You may want to pay for a
>matched set.
>
>Paul you may want to add to this.
>
>pete
>pgerba@crl.com
>

I recently installed four unmatched Russian 811As in a Gonset GSB-201 amplifier. They were marked "Pride" in large red letters on the bottle, but appeared to be identical to Svetlana tubes except for having a phenolic rather than ceramic base. One of the tubes was defective, in that one of the two filaments (811As have two filaments, wired in parallel) was broken. I replaced it, and all four work perfectly. They are obviously made to close tolerances electrically, since at full bore the plates glow the same dull red color. They have stable, unchanging output, and very impressive mechanical construction. Based on my experience, I wouldn't bother buying matched tubes. I don't know what was wrong with the Svetlana tubes, but they don't seem typical of my and others' experience. I get the impression that a fairly high percentage of Russian tubes suffer mechanical damage in transit, but the warranty covers the defective ones.

Jim W8ZR

From boatanchors@theporch.com Tue Jan 30 08:18:23 1996
From: Robert King <reking1@ix.netcom.com>
Subject: Amateur Gear in WW II
Message-ID: <199601300630.WAA03714@ix4.ix.netcom.com>

Information on the book mentioned in my previous post is
as follows:

"The Secret War", by Brian Johnson
First published 1978 by the British Broadcasting Company
Published in the United States by:
Methuen Inc, 777 Third Avenue
New York, NY 10017
ISBN 0-458-93340-6

This book is probably out of print by now and would have
to be obtained via a used-book dealer.

Also highly recommended for those interested in WW II
electronics is:

The history of US Electronic Warfare, Vol I
by Alfred Price
Published by: The Association of Old Crows *
no address given
no ISBN
Library of Congress Catalog Card No. 84-70798
First Edition, First Printing Sept. 24, 1984.

The above book has many photos of amateur and WW II military
gear, including the Halli S27 and SX28, as well as early
HP, RCA and Dumont commercial equipment installed in AC and
used for electronic warfare purposes.

* The AOC is a quasi-professional society of industry, govt.
and military technical people involved in the development
and use of electronic warfare equipment. They can be found
on the net at: http://www.jeddefense.com/jed_access.html.

Bob King

From boatanchors@theporch.com Tue Jan 30 08:18:23 1996
From: "ROBERT W DOWNS, WA5CAB" <103012.2130@compuserve.com>
Subject: RE: AMATEUR GEAR IN WW-II, BA 450
Message-ID: <960130132732_103012.2130_GHU52-2@CompuServe.COM>

Group,

According to my database and/or TM collection, the Hallicrafters S-27 was used in US (and probably British) service as the BC-787. The related S-36 was BC-787-B and later R-44/ARR-5. The SX-28A was used for similar countermeasures functions as R-45/ARR-7. If anyone has any corrections to this, or related info, please let me know.

I've often wondered why Hallicrafters built these sets under their civilian nomenclature. They are in the standard ATR package, about a foot across the front and about two feet deep. Must have seemed strange to any Hams looking at them. Anyone know any of the background?

73, Robert Downs, WA5CAB

From boatanchors@theporch.com Tue Jan 30 12:33:42 1996

From: Henry van Cleef <vancleef@bga.com>

Subject: Re: AMATEUR GEAR IN WW-II, BA 450

Message-ID: <199601301757.LAA21349@zoom.bga.com>

As ROBERT W DOWNS, WA5CAB said

>

> Group,

>

> According to my database and/or TM collection, the Hallicrafters S-27 was used

> in US (and probably British) service as the BC-787. The related S-36 was

> BC-787-B and later R-44/ARR-5.

>

> I've often wondered why Hallicrafters built these sets under their civilian

> nomenclature. They are in the standard ATR package, about a foot across the

> front and about two feet deep. Must have seemed strange to any Hams looking at

>

Since I have an S-36A here I'll comment on a few of the details.

Differences between the S-27, S-36, and S-36A are relatively minor.

The S-36A says, on its front panel, "Ultra High Frequency Communications Receiver." Frequency range is 27.5-143 Mhz. per the specs. Actually there is a chunk of dial beyond the 143 Mhz marking that is not calibrated. The S-27 specs said 145, and I've heard that some early S-36's had S-27 dials, with calibrations above 143 Mhz. Dimensions are 9H x 19W x 14D, all inches, and the set weighs plenty, something like 75 lbs. The general outline planform is about the same as the SX-28 series. Differences are that the RF deck is on the left, and completely demountable from the chassis (10 wires, 3 nuts on studs), and there is a reinforcing bar across the back between the two side reinforcements. A lot of the weight is from use of sealed

transformers for AC power, audio output, and a 2-section filter choke, plus a huge 3-section sealed paper capacitor for the power supply filter. Mechanical construction is 100% steel, and the front panel is a piece of 1/16" steel with an alligator finish embossed in it, copper plated and painted flat black. The underside of the chassis is not very deep, about 2-1/2 inches. Almost all of the components are mounted on large phenolic terminal boards, wired up for the most part through a large harness that is full of that funny WWII wire that is color coded with tracers, not solid colors. There are a few large bathtub paper caps; all of the others are postage-stamp type, either mica or molded paper. Zero wax paper condensers, and no molded plastic "firecracker" tubular caps. Finding specific components in a circuit can be an ohmmeter exercise, because some of them are some distance away from the tubes they are associated with.

Circuit block diagram is traditional single-conversion superheterodyne. The RF deck, which is completely enclosed, has a 956 RF preamp, a 954 mixer, fed through the cathode by a 955 local oscillator. Those acorn tubes are cute little conversation pieces, but not real powerhouses. IF is 5250 Khz., two stages, using an 1852 and an 1853 (6AC7/6AB7). There are two detector stages. One uses a 6SK7 3rd IF feeding a conventional 6H6 diode detector. The other is a limiter-discriminator, using a 6AC7 and a 6H6. The audio section has a 6SL7 and a pair of 6V6's operating push-pull, similar to the SX-28, but with some subtle differences. There is a 6J5 BFO that injects into the AM detector, and a noise limiter in the AM detector circuit.

Plenty of front panel controls. There is one multisection wafer switch which has the AC power switch mounted on the back of it, marked "A.C. OFF-SHARP-BROAD" The wafer sections swap secondaries in the first three IF transformers. One secondary is critically coupled, for "SHARP"; the other is overcoupled for "BROAD." A separate switch for "AM" or "FM" switches the output of the second IF to the appropriate detector circuit and selects the audio feed to the 6SL7. An S-meter is also switched by the AM-FM switch. On AM, it monitors the plate current of the 2nd IF in the usual Hallicrafters fashion. On FM, it is connected to the discriminator output. The remaining front panel controls, except the tone control (a 4-position switch) are conventional comm. receiver stuff.

In terms of performance, 100 Mhz. was "state of the art" in 1940, when this design was laid down----and the S-36A shows it. All of the coils are mounted on ceramic bandswitch wafers---a miniaturized version of what you would find in an HF set---with some pretensions at a "turret" type construction. Plenty of sensitivity at 6 meters, but on the top band (of 3; frequency ration on each is about 1.8:1, with plenty of overlap), the set starts to lose sensitivity at the low end and gets worse as you go up. Bandpass of a 5250 Khz. IF, even overcoupled, is

pretty narrow, so the set "loses" in ability to drive the discriminator and audio to full output on weak commercial FM signals. The discriminator is also pretty narrow, and has to be tweaked precisely to the IF bandpass center on "broad" to operate properly. The original de-emphasis filter was set at 113 microseconds, and needs to be changed for commercial FM listening.

The audio section is remarkable---this is one set where the "fi" is genuinely "hi," not common in a prewar design. The 6SL7/6V6 circuit is a floating paraphase, complete with an unbypassed cathode resistor for the two 6V6's to assure balanced drive. The 4-position tone switch moves a large capacitor (bathtub) and some resistors around in the circuit. On "High Fid." one output transformer secondary is fed back to the 6SL7 to give "flat" (3db.) response between about 80 Hz. and 17 Khz. On "bass boost," the feedback is modified to be high-pass, and the amplifier is still perking away below 20 Hz. on the low end. A real "boom box" in this position, if you've got a speaker to handle it. On "Normal," the amplifier is run open-loop, with the cap and a series resistor across the output transformer primary, and on "Low," the cap is directly across the primary. So you can choose between "Wurlitzer Jukebox," "toob hi fi," "good old console sound" and "traditional muddy comm receiver audio" with that switch.

I'm not sure what led Bill Halligan to put products of this type in the Hallicrafters line. The set is mechanically solid, which is, to put it bluntly, unusual for Hallicrafters. The iron-core magnetics were made by UTC, and seem to be reasonably good, but I'd be happier if they ran a bit cooler. Case temps rise to around 50C, and I wonder how the power transformers did running on 50HZ primary power in Merrie Olde Englande. The RF and IF designs look to be Hallicrafters in-house designs farmed out to a cheap coil winding shop. The IF's are OK, but I'm not so sure about the RF stuff. My set arrived with built-in-and-shipped coil defects that never should have gotten as far as the shipping dock, and it took a bit of finagling (one had to be rewound) to get the thing to work properly. Plenty of technician turkey-tracks, and some mechanical damage, from previous attempts to get the set to work properly. Looks to me as though Halligan didn't have a really top mechanical type in-house. It's got the flavor of having been done by detail draftsmen who got strength by adding iron. One can be happy that these sets are rare for Hallicrafters in using gear drives for tuning rather than dial cord, but getting that clockwork adjusted properly takes a bit of skill, and to get at it, you have to take the RF deck off the set, then take the clockwork off the deck.

Scuttlebutt has it that Halligan figured that by adding some JAN-spec ("MIL" wasn't invented until 1948) iron to the line he could get some US govt. business, and they were added to the commercial line before

the US entered WWII. But when you compare them to the likes of the S20R and SX25, and then consider that a JAN version of an HRO or a Super Pro was the commercial set with a nameplate added, it's obvious that Hallicrafters was working on new (and unfamiliar) ground. It looks to me as though Hallicrafters built out inventories of parts on hand after V-J day, and that was the end of the experiment.

>From my perspective, I got catalogs from Leo W0GFQ at the end of the war and drooled and dreamed over the idea of a brand new SX-28A, but the small matter of \$223 was about \$218 over my budget, so I never got one. Later on, a used S-40 walked in the door, and it certainly slowed down my ardor for brand H. The 27-28-36 family look to me now like an attempt to reach for unfamiliar stars, and they're something of an interesting study in how a company responds to something smacking of "quality" beyond their traditional product experience.

--

Hank van Cleef vancleef@bga.com vancleef@tmn.com

From boatanchors@theporch.com Tue Jan 30 19:16:11 1996
From: Michael.J.Knudsen@att.com
Subject: Re: AVC/AGC
Message-ID: <9601301902.AA06909@bock.ih.att.com>

Joe, to be honest the reason I didn't name the rx with the drifty front end was I couldn't remember which one it was! Yes, I agree with you that we should be more open and name names. I remember the first time I read Consumer Reports and was so impressed that they were naming names and getting away with it!

But, as I think about it, I can narrow down the offending set to one of two sorry-staters in my basement. Either a good old Rat Shack DX-xx (maybe 50), a general-coverage plus bandspread rx with two drum dials (actually a pretty hot single-conversion set, but the audio is sadistic), or the DX-3xx (Sangean xxx) digital allwave portable -- the one you can get with or without built-in cassette recorder.

I think I've found the same effect (local oscillator freq varies with AVC and manual gain) on some firebottle sets, but not any good ones.

Oh yes, the Zenith Trans-0 Royal 7000 (another sandbox) also has the problem. Thank the Lord for BA rx! 73, mike k w9nrd/ae

From boatanchors@theporch.com Tue Jan 30 19:16:11 1996
From: Bob Roehrig <broehrig@admin.aurora.edu>
Subject: Re: AVC/AGC
Message-ID: <Pine.ULT.3.91.960130161322.15694B-100000@admin.aurora.edu>

On Tue, 30 Jan 1996 Michael.J.Knudsen@att.com wrote:

> Joe, to be honest the reason I didn't name the rx with the drifty
> front end was I couldn't remember which one it was!
>
> I think I've found the same effect (local oscillator freq varies with AVC
> and manual gain) on some firebottle sets, but not any good ones.

Maybe my response didn't get sent. I have the same problem with my
HRO-M on the 14-30 MC band. In fact the manual says that when aligning
the unit, the mixer and osc trimmer adjustments will interact.
It will drift with either AGC or manual RF gain change. I have installed
a regulator that powers both the osc and the mixer and this eliminated
the problem on lower bands but not 14-30 MC. What are other HRO users'
experiences? Is there a cure?

E-mail broehrig@admin.aurora.edu 73 de Bob, K9EUI

From boatanchors@theporch.com Tue Jan 30 08:18:23 1996
From: Pedro Duraes <pduraes@mail_server.eid.pt>
Subject: BC 348-M Schematics
Message-ID: <9601300956.AA15525@capela.eid.pt>

Hi everybody.
A month ago, a friend of mine give me an BC 348-M that he found in
the Portuguese Navy Surplus.
The radio is in good condition for the age the dial front cover is missing
I hope to find one soon.
His interior is in good shape just like new, but it doesn't work and I
want
to put it to work, but... (there are always a but ...)
The big problem is that I can't find his schematics here in Portugal
Can anybody help me ?

ks in Advance

Duraes CT1CAH

Than

Pedro M.C.

Email

pduraes@eid.pt

From boatanchors@theporch.com Tue Jan 30 12:33:42 1996
From: Pedro Duraes <pduraes@mail_server.eid.pt>
Subject: BC 348-M Schematics
Message-ID: <9601301455.AA21576@capela.eid.pt>

Hi everybody.

A month ago, a friend of mine give me an BC 348-M that he found in the Portuguese Navy Surplus.
The radio is in good condition for the age the dial front cover is missing I hope to find one soon.
His interior is in good shape just like new, but it doesn't work and I want to put it to work, but... (there are always a but ...)
The big problem is that I can't find his manual and schematics here in Portugal.

Can anybody HELP ME ?

PS: I saw in mail that you folks in USA know a lot about this equipment.
Sorry me because of my stupidity but this RX is new to me

Thanks in Advance
Pedro M.C.Duraes CT1CAH
Email pduraes@eid.pt

From boatanchors@theporch.com Tue Jan 30 08:18:23 1996
From: David Stinson <72227.1640@compuserve.com>
Subject: Re: BC-348
Message-ID: <960130114330_72227.1640_EHM57-1@CompuServe.COM>

>I picked up a beautiful BC-348-0 at the St. Charles, Mo.
>hamfest ... still has the dynamotor inside.
Excellent! Hard to find one that hasn't been hacked-up.

> The I.F. needs peaking on the xtal frequency though.
The BC-348 needs to be aligned "by the book,"
especially the xtal filter alignment.
Try 1-800-607-6146 or Fair Radio, which has good copies.

>What does the last letter mean?

While there were many ending letters in the model numbers, the 348 came in three basic flavors commonly known as the "P," "Q" and "R" models. The letters denote differing manufacturers or production runs. They differ in design and construction so it's important to get the right manual.

"P" family: E, M, O, P

"Q" family: J, N, Q

"R" family: H, K, L, R

>Should I leave the dynamotor in it and put up
>with the noise or convert it to a dc supply?
A properly lubricated dyno shouldn't be all that noisy.
Please don't do any conversion to the rig. You will instantly
destroy it's value. If you can't put up with the noise, we will
find a well-done 110vac job to trade. I've been looking for
an unmolested "P" family rig for years, so if you really
don't want all the trouble.... :-)

>What is the -18v from the dynamotor used for?
>Could this be eliminated by grounding this point?
The B- out of the dynamotor floats slightly above ground
through choke 101-B to provide grid bias to the output stage.
You should not ground this point. Incidentally, many hams
didn't understand this and grounded the B-, which led them
to hack out perfectly good audio output stages and insert
perfectly horrible ones. With a properly matched speaker,
I'd put the sound of a 348 up against any receiver going.

>Why did they put the "OFF" position in between AVC and MVC?
Engineers! Who can account for the black arts they practice
when the moon is full and the cold fog creeps in?

>Is there another, smaller transmitter that would make a nice match?
None that I know of--but then I don't know everything.
Unless you desire to match things up (like a certain nut-case
I see in the mirror each morning), let your tastes be your guide.

>The BC-348's Motor gen says 24 volts in big letters on it. In small type
>is 28v. I've been using 24 and it seems to work fine. The filaments add
>up to 24v so whats the deal? Would 28 work any better? Will the gen and
>fils last longer with 24?
An aircraft's batteries provided 24VDC when the engines weren't running.
When the engines were turning over, they were charged at 28 VDC.
The genny and the tube fils will last longer at 24 VDC,
and the unit will run cooler.

>I'm not exactly delighted with the combination

>RF/AF gain control on the BC-348 nor my RAX.
A 1930's radio can never perform as a 1990's radio, just as
a Ford model-T will never perform like a Saturn.
But then, what romance has a Saturn?
What story does it have to tell?
It's the price of The Fire that warms our hearts....
and seems a bargain to me.

73 DE Dave Stinson AB5S/7
72227.1640@compuserve.com

From boatanchors@theporch.com Tue Jan 30 08:18:23 1996
From: Steve Ellington <n4lq@iglou.com>
Subject: Re: BC-348 "O" The O means . .
Message-ID: <Pine.SOL.3.91.960129225301.13218C-100000@iglou>

> WELLS-GARDNER, J,N,Q
> J,N, and Q are the late designs w/o ant trim

Thanks. The tags says Wells Gardner so I looked closer and that O has a
little tail on it! Q

> Don't trash the dynamotor. You can get these rigs all day long without the
> motor. Keep this one proper.

Ok It stays for now. Just need to get the xtal filter fixed.

Steve Ellington N4LQ@IGLOU.COM Louisville, Ky

From boatanchors@theporch.com Tue Jan 30 12:33:42 1996
From: Michael.J.Knudsen@att.com
Subject: Re: BC-348 "O" The O means . .
Message-ID: <9601301722.AA06826@bock.ih.att.com>

Thanks for decoding the BC348 letters.
My R set does indeed have a Belmont plate inside, tho the case says
Stromberg-Carlson (I wish).

Belmont and Wells-Gardner were the major suppliers of Sears Silvertone,
Wards Airline, Western AUto Truetone, and probably lots of other
private-label brands. I think of W-G as the bigger, fancier sets
than the Belmonts, but apparently Belmont was able to build something
as nice and complex as a BC-348. I really think I should find a Silvertone

logo plate and screw it to the chassis (just kidding....). 73, mike k w9nrd/ae

From boatanchors@theporch.com Tue Jan 30 08:18:23 1996
From: "ROBERT W DOWNS, WA5CAB" <103012.2130@compuserve.com>
Subject: RE: BC-348, BC-374, AN/ART-13 BA 450
Message-ID: <960130132737_103012.2130_GHU52-3@CompuServe.COM>

Steve & Group,

Since I'm probably fourth in line with a response to your questions, I'll just say that when the BC-348 was paired up with the AN/ART-13 late in the War, the set was known as the AN/ARC-8. An if you've found a BC-348 that someone hasn't butchered by putting a homebrew AC supply in, please don't. There are plenty of butchered ones around.

Signal Corps radio set nomenclature consisted of a one or two letter prefix, sequence number, and a letter (sometimes two letters). The prefix identified the function (sometimes). 'BC' stood for Basic Component (i.e., of a set). The sequence number (348) was the next number in the sequence of projects to be worked on (many numbers never saw the light of day). The suffix letter (if any, in this case 'O') was a revision or contract indicator, or both. In today's terms, the BC-348-O, made by RCA, was a different model of the same basic set as, for example, the BC-348-P, and was made by a different contractor than the BC-348-Q. There were at least four different contractors, each of whom made from one to five models (I have no info on the BC-348-A to D hint hint). Most also made several models of the BC-224, the earlier 12/14 VDC model of the BC-348. All letters were not produced. I assume that some contracts or revisions were canceled.

According to my records, the BC-348 was about third behind the PE-75 and the BC-221 in the number of different models produced.

The BC-348 was replaced by the AN/ARR-15. So far as I can determine, the BC-348 last saw US service as R-584/MRC in the Korean War vintage AN/MRC-20, a vehicular set.

I haven't come across any other 24V Signal Corps Liaison transmitter set that the BC-348 might have been paired with. Maybe someone else has. The BC-307, (also made by GE, it looked like a baby BC-375 but didn't have plug-in tuning units) was a 12V set. The BC-223 was a ground set, and wasn't available for 24V (the -AX) until mid war. Although the BC-348 could have been used with several Navy sets, such as the ATD or any of the GP family, this wasn't normally done.

73, Robert Downs, WA5CAB
103012.2130@compuserve.com

From boatanchors@theporch.com Tue Jan 30 08:18:23 1996
From: GaryReed <deer119@alllinux1.alliance.net>
Subject: BC-348-*
Message-ID: <m0thC7e-000pYTC@alllinux1.alliance.net>

There is more to the meaning of the last letter than the company that made the unit. My first receiver was a BC -348-Q when I used as a novice in "72". I bought a BC-348-R a few months ago and found out that it had an additional IF can. I have schematics for the BC-348-Q but had to go looking for info on the R. A built in power supply had been added and it seems the wires to it were mis connected along the way and a few resistors are cooked. Someone replaced the rectifier tube with diodes and as a result the b+ was around 325 vdc. Would this hurt anything? Also does the additional IF make much of a difference in the sets performance ?
Its been a long time since I operated a BC-348.
Thanks Gary Reed WB80FU

From boatanchors@theporch.com Tue Jan 30 08:18:23 1996
From: Johnson_Dan@AAC.COM
Subject: Re: BC-375, ART-13.
Message-ID: <9601300642.22763.aa@SMROUTER.AAC.COM>

>> into the 348 tho, as the manuals explain. Did you know the BFO level
>> adjusts up and down with the signal strength automatically under AVC?

> No but thats great. I wondered how the managed to eliminate the RF gain
> control as a seperate knob...

Oh, great. Now I get to figure out *why* my BC-348-Q has an RF gain knob instead of the dial light dimmer. It was there when I bought it at Gaithersburg in the 70s, along with dynamotorectomy and addition of an ac power supply, and I thought at the time that the previous owner just wanted the convenience of an RF gain for sensitivity purposes.

These comments lead me to believe that there may have been more to it. Perhaps the automatic BFO level adjustment circuit had gone bad, and the RF gain was a workaround.

Thanks, guys, for a relevant and interesting thread.

BTW, can anyone give an idea of the price range in which one might find a DY-17A (for an ART-13)?

73.
-d

Johnson_Dan@aac.com

KC4EWT ~ Radio Free Herndon VA ~ QRP-L #288 ~ QRP ARCI #8741 ~ NWQRP #340
Specializing in CW ~ Boatanchors ~ QRP Operating ~ Old-Time Radios

From boatanchors@theporch.com Tue Jan 30 08:18:23 1996
From: Steve Ellington <n4lq@iglou.com>
Subject: Re: BC-375, ART-13.
Message-ID: <Pine.SOL.3.91.960129224340.13218A-100000@iglou>

Well, I peaked up the I.F.'s as best I could on this BC-348 but that xtal filter is a bummer. Really, all it seems to do is knock about 30db of gain off the top. If it adds any selectivity I sure can't tell it. Anyone else have any experience with it? Maybe the xtal is bad.

Furthurmore.... How come they put the xtal filter between the 1st and 2nd I.F.? Seems like it is usually placed at the end of the chain i.e. the HQ-129. What would make more sense?

Steve Ellington N4LQ@IGLOU.COM Louisville, Ky

From boatanchors@theporch.com Tue Jan 30 12:33:42 1996
From: Bob Roehrig <broehrig@admin.aurora.edu>
Subject: Re: BC-375, ART-13.
Message-ID: <Pine.ULT.3.91.960130082748.6682A-100000@admin.aurora.edu>

On Mon, 29 Jan 1996 Johnson_Dan@AAC.COM wrote:

>

> Oh, great. Now I get to figure out *why* my BC-348-Q has an RF gain knob
> instead of the dial light dimmer.

I don't have either my 348 or the manual nearby here at work, but wasn't the "gain" control a ganged pot that was both a RF and audio gain?

E-mail broehrig@admin.aurora.edu

73 de Bob, K9EUI

From boatanchors@theporch.com Tue Jan 30 12:33:42 1996
From: Michael.J.Knudsen@att.com

Subject: Re: BC-375, ART-13.

Message-ID: <9601301648.AA06800@bock.ih.att.com>

Tnx fer the posting re old aircraft freqs. My Dad's old Philco 37-620 and lots of other contemporary sets have band markings for "night aircraft" and "day aircraft." I know there are some in the 3-MHz range.

The LW beacons from 200-520 KC aren't the only survivors of the good old days, thank heavens. You can still copy "New York Weather" on USB around 3450 most of the time, and trans-oceanic flights do SSB in the 8 and 10 MHz bands. You can hear the controllers handing off approaching flights to the local VHF controllers.

Maybe someday satellites will replace all that, but for now there's still some good listening. Be sure to use a BC-348 for the right ambience :-)
(I should talk, still need to get mine working again).
73, mike k w9nrd/ae

From boatanchors@theporch.com Tue Jan 30 19:16:11 1996

From: Michael.J.Knudsen@att.com

Subject: Re: BC-375, ART-13.

Message-ID: <9601301830.AA06881@bock.ih.att.com>

Well, I doubt the previous owner was trying to achieve manual control of the BFO level (tho it's possible). The automatic system is very simple -- the BFO plate is fed thru the same dropping resistor as the RF and IF screens. When a strong signal pumps up the AVC, and/or prompts the operator to tuirn down the RF gain, the screen current draw decreases so the BFO plate voltage goes up, and you get more BFO injection.

This makes it extra important not to over-advance the RF gain during CW/SSB reception, since not only do you increase the IF level at the detector, but you're decreasing the BFO injection, just when you need *more*. Hmmm, that sounds like an argument for separate RF and AF gain knobs right there. I guess the Army wanted to keep things simple.

The AVC is prety good, tho. It's taken off ahead of the BFO, a rare and special feature for those pre-SSB days. (Oops, actually the BFO injection does hit the AVC diode, but its level is low enough that it doesn't de-sense the AVC as in most rx). Also, when you switch on the BFO the AVC goes from fast to slow -- an extra cap is cut in. Great for CW, and by dumb luck also for SSB.

If I remember right, you can run full gain (with AVC) on CW, but SSB distorts too much and you have to go to manual gain. I *think* the RF gain half of the volume pot is shorted out (for full gain) when you switch to AVC, so the pot controls only AF gain.

BTW, the BC-348 probably set a world record for the number of decoupling and dropping resistors in series with B+ feeds to every stage, with of course a bypass cap (the famous "shirnk wrapped" micamolds) for every resistor. Lots and lots of places for the smoke to escape from this otherwise FB rx. I have to replace a couple Rs and Cs to get mine back on the air. And rework the neatly built, but otherwise hosed up AC power supply.

And TNX to the several folks who've sent me manual page copies for this box. 73, mike k w9nrd/ae

From boatanchors@theporch.com Tue Jan 30 19:16:11 1996
From: Michael.J.Knudsen@att.com
Subject: Re: BC-375, ART-13.
Message-ID: <9601301853.AA06899@bock.ih.att.com>

Sounds like what you're hearing 30 dB down is just the full IF that leaks around the filter. Somewhere in there should be a narrow peak. Maybe it's still too far off alignment for you to find it, or maybe you really do have a bad or dirty rock in there. I seem to remember my xtal filter worked, tho it was no NC101X, not all that great.

I think one of the manuals says why the xtal filter is not at the *beginning* of the chain (after the mixer). Pretty sure my HQ-129X manual says why it's in the middle, not up front -- I think it involves getting enough drive into the high capacitance of the xtal and its holder, using the 1st IF to get the drive.

Look at the good side, you can stick a panadapter after the 1st IF before the filter.

BTW, if you've never seen the xtal filter on old Nationals, it's really neat. You can unplug the little can, take it apart, and slide the quartz slab right into your hand and clean it up. And the work FB.... 73, mike k w9nrd/ae

From boatanchors@theporch.com Tue Jan 30 19:16:11 1996
From: Steve Ellington <n4lq@iglou.com>
Subject: Re: BC-375, ART-13.
Message-ID: <Pine.SOL.3.91.960130154644.18422D-1000000@iglou>

Thanks for all the input. I can't wait to get home from work and clean my crystal! I should be able to feed somewhere around 910KC into the first IF, put the scope on the sec. of the next IF xfmr and sweep around till I see a sharp peak. RIGHT? Tried this last night but nothing.....BTW. It

appears that the xtal's coil has a capacitor across it on the schematic but apparantly it's part of the coil and consists of 2 wires or something. Hope there's nothing wrong with that mess.

If the xtal is bad, wonder if I could just order a new one from Peterson? Any reason why not?

I did order one from them for 3521kc and it came out 3522.4! Even on 2 different rigs so we can't blame it on circuit capacitance. Furthermore, I asked for FT-243 type pins. It came with sleeves over their skinny pins which pulled off upon first usage. I had to solder them on! PR doesn't even make real FT-243's anymore. Just those overgrown CB looking xtals.

Steve Ellington N4LQ@IGLOU.COM Louisville, Ky

From boatanchors@theporch.com Tue Jan 30 08:18:23 1996
From: Sheldon Wheaton <swheaton@sky.net>
Subject: Book: "Instruments of Darkness", et.al.
Message-ID: <Pine.SOL.3.91.960129233934.11896C-100000@solar.sky.net>

On Mon, 29 Jan 1996, Dick Dillman wrote:

>
> I've been trying to find a copy of "Instruments of Darkness" for some
> time now.
>
> If you or anyone else on the list can steer me to either of these
> books I'd greatly appreciate it.

For Dick and any other interested parties:

"Instrument of Darkness" by Alfred Price is probably still available from Pennisula Publishing, which is where I got my copy. The 2nd edition, dated 1977, includes additional material covering North Vietnam and the Middle East. ISBN 0-932146-17-1 284 pages. In my catalog dated 1991, they listed it for \$26 plus \$2 S&H, no doubt more today. Their catalog includes lots of other titles on Radar, Electronic Countermeasures, and Communications. 1991 address/phone:

Pennisula Publishing
PO Box 867
Los Altos, CA 94023
(415) 948-2511 fax: (415) 948-5004

Another "Must Read" title for the electronic warfare historian is "History of U.S. Electronic Warfare", also by Alfred Price.

Published by the Association of Old Crows, it is available in two volumes: #1 covers up to 1946 and includes some of our favorite BA items, such as the Hallicrafters S-27 (anyone have an APT-2 jamming TX for sale?). Lots of pictures and GREAT reading and about 300 pgs, with a fact filled appendix. Forwards by General Curtis LeMay & Senator Barry Goldwater.

2nd volume (I don't have) covers from '46 to '64. 200 photos total in both volumes.

Prices in 1991 were \$23 for Vol. #1 and \$42 for #2 (about 500 pgs) including shipping. Address (1991):

Assoc. of Old Crows
The AOC Building
1000 North Payne St.
Alexandria, VA 22314-1696
(703) 549-1600

Another book probably still in print on WWII Naval electronic warfare is "Slide Rules & Submarines" by Montgomery C. Meigs. Deals more with strategic and political issues, although there is some discussion of the technology involved. Lots of ASW operations in the North Atlantic and some surface radar in the Pacific. Price was \$9 from US Gov't Printing Office a couple years ago. 74 photos. 269 pages, softbound.

Unfortunately, I have no monetary interest in any of these publications.
73, Sheldon KC0CW swheaton@sky.net

From boatanchors@theporch.com Tue Jan 30 12:33:42 1996
From: midshires@cix.compulink.co.uk (Andrew Emmerson)
Subject: Re: Book: "Instruments of Darkness", et.al.
Message-ID: <memo.303995@cix.compulink.co.uk>

In-Reply-To: <Pine.SOL.3.91.960129233934.11896C-100000@solar.sky.net>
"Instrument of Darkness" by Alfred Price is probably still available from Pennisula Publishing, which is where I got my copy.

Sadly this book promises more than it delivers, at least IMHO. Some of the author's statements are contested by others and it's certainly not in the same league as more recent, better researched books. All rather sketchy, I'm afraid.

One of the myths it took a long time to dispel is the effectiveness of German radar. There's a cozy conspiracy to rubbish everything the Germans did (and of course they did make mistakes). But a lot of their UHF and SHF systems were far more advanced than our Allied efforts...

perhaps over-ambitious but certainly more advanced. There have been some excellent books published in recent years (in German of course) which tell their side of the story.

Equally notable is the fact that the Germans had television-controlled glide bombs in WW2, with TV transmissions on 70cm. They worked up to the point of reaching the target but then suffered from reflection problems (see Johnson's book, "THE SECRET WAR", or my article some years back in "Wireless World"). To the best of my knowledge the Allies did not deploy military television until after the end of the war.

Again, the Germans developed and demonstrated in 1940 a complete 1029-line television system, the purpose of which was said to be transmitting maps for military purposes. Employing a slide-scanner as pickup device the apparatus gave exceptional results, exceeding 16mm film in resolution. Despite this apparent success, the authorities were apparently unconvinced of the system's strategic value and given its need for 15MHz transmission bandwidth, it is difficult to see how these pictures could have been transmitted with security over long distances.

Broadcast television (441 lines) also continued in Germany despite the war as if nothing else was happening. This was intentional of course; just as Germany continued making epic movies in colour as a morale booster, the television service continued as normal. Allied attacks belatedly put an end to this. Hamburg's cable TV service was the first to go, in 1943, and in the capital city the television transmitter was finally bombed and destroyed on 26th November 1943. Even this did not put paid to television in Berlin, since the studio continued to feed the cable TV system and it was only when the studio was requisitioned for film production in autumn 1944 that television broadcasting finally came to an end in Germany.

Pretty amazing stuff, eh? It's all factually accurate, just that you won't find it in "our" version of the war saga!

--Andy.

From boatanchors@theporch.com Tue Jan 30 12:33:42 1996
From: "Rhett T. George" <rtg@ee.duke.edu>
Subject: Collins Audio FM-11
Message-ID: <199601301440.JAA101862@ee.duke.edu>

- Greetings, Good Friends -

Here's hoping for some info on the AM-FM tuner noted above. Already I have

tried rec.antiques.radio+phono, but received no response. I understand that W A Collins and Collins Audio claim no connection with Collins Radio. And, Collins Audio was located in New Jersey, a long ways from Iowa. Since there are lots of folk named Collins, this seems reasonable. Does anyone know if there was ever a connection between Art Collins and W A Collins?

The FM IF is marked on the chassis for all 6AG5's, but the population is about evenly split between those and 6AK6's. Does anyone have a schematic for this 1948 critter? The power transformer is almost certain to be WW II military surplus and, curiously, the AM tuner is of TRF design.

Any and all enlightenment is greatly appreciated.

73
Rhett George - KE4HIH
rtg@ee.duke.edu

From boatanchors@theporch.com Tue Jan 30 12:33:42 1996
From: Engbert Oord <engbert.oord@jet.uk>
Subject: Re: Collins Audio FM-11
Message-ID: <9601301512.AA12924@jet.uk>

At 08:41 AM 30/01/96 -0600, you wrote:

>

>curiously, the AM tuner is of TRF design.

>

This may not be so curious. Obviously this tuner is meant to produce as HI-FI a sound as possible. One way of doing that on AM is by means of a simple and cheap TRF. A wide passband is required (appr. 10 kHz) but does not have to be very sensitive, on the contrary. Possibly only suited for reception of strong local AM stations.

Engbert

Engbert Oord , G7THB
JET Joint European Torus, Culham ,UK
Email : eo@jet.uk or engbert.oord@jet.uk

From boatanchors@theporch.com Tue Jan 30 19:16:11 1996
From: Michael.J.Knudsen@att.com
Subject: Re: Collins Audio FM-11
Message-ID: <9601301956.AA06986@bock.ih.att.com>

Someone else is holding one of those "Collins" tuners for me -- about time I sent him some shipping money. I believe there's no more connection

than with Judy or Phil Collins, whose songs will nonetheless sound good on the tuner :-)

Wonder if it was the factory or the owner who subbed 6AK6s for 6AG5s? 6AK6s are used in the R390A (now there's a Collins connection :-).

Many hi-fi AM tuners will be built as TRFs. An easy way to get wider bandwidth (tho BW would change across the BC band), and some purists feel that frequency conversion bruises the signal.

BTW, I have a "Brooks" AM/FM early tuner. It uses permeability tuning on both bands, but the FM is with brass slugs, so the freq goes *down* as they pull out of their coils. So the FM dial numbers are reversed from the AM. 73, mike k w9nrd/ae

From boatanchors@theporch.com Tue Jan 30 19:16:11 1996
From: Norm Flasch <flasch@cushy.eecs.nwu.edu>
Subject: Elgin ARCI meet
Message-ID: <199601302302.RAA17767@cushy.eecs.nwu.edu>

I attended the Antique Radio Meet at the Elgin Holiday Inn this past Sunday. Small but lively and well attended gathering held indoors this time of year. There was a beautiful Millitary version HRO, like new, with two complete sets of coils and original manual for \$450.00. One of the nicest old rigs I have seen. I believe it followed the seller home.

There was a wonderfully restored HQ-100C receiver that was purchased by Dr. Makow (sp?) for display in his museum in Elgin. Joe Mente was the restorer. If anyone is interested, I have his number. The radio was priced at \$125.00.

My pickens were slim, but nice. A very good Zenith TO 3000-1 for \$60.00. Batteries were included and it works great. I thought Judy was going to leave me for this radio! She thinks it is one of the nicest we have. Actually, I think she is happy that I didn't come home with a lot of what she calls junk, like old Maganovox chassis. We know better in these digs.

One thing I noted was the very high cost of old literature and books. Much of it went home with the sellers.

--

Norm Flasch flasch@eecs.nwu.edu Northwestern University
Electrical Engineering and Computer Science

From boatanchors@theporch.com Tue Jan 30 19:16:11 1996
From: "rohre" <rohre@arlut.utexas.edu>
Subject: estate sale of SWL receiver; TCS ?
Message-ID: <n1389106446.77264@msmailgw1.arlut.utexas.edu>

If anyone on the list would like details on a Drake SWL receiver available from an estate; please email me direct: Stuart Rohre K5KVH
rohre@arlut.utexas.edu

Also, if anyone can say when the 3 pin type of crystal holders used in the TCS Collins transmitter came into service, and was it replaced by the FT 243 crystal holder and when? (My TCS now has original style crystals in 3 pin style of two volumes.)

Thanks in advance,
73, Stuart K5KVH

From boatanchors@theporch.com Tue Jan 30 19:16:11 1996
From: "Allan Fritsche" <fritsche@msn.com>
Subject: Final on Grill cloth color for the R-46 speaker
Message-ID: <UPMAIL03.199601310000400096@msn.com>

Well sports fans, I recieved numerous repilies from my message about requesting the original color for the R-46 speaker Grill, the gamount ran from black, somewhat gold, white, gray, silver,etc. I suppose it doesn't really matter to me anymore, so I painted mine silver to match the lid of my SX-101MK3

Thanks everyone for your replies.
Al Fritsche
fritsche@msn.com

From boatanchors@theporch.com Tue Jan 30 08:18:23 1996
From: "Roy C. Pollitt" <76161.2377@compuserve.com>
Subject: FS: BA Goodies and others
Message-ID: <960129211108_76161.2377_GHM140-2@CompuServe.COM>

HAM EQUIPMENT FOR SALE

**** Prefer Pick-Up Only ... But will consider shipping most items ***

DRAKE C-Line (R4C, T4XC, MS-4 w/AC-4)
MN-4 MATCHING NETWORK
Excellent Condition

Sold as a unit ONLY.
\$420

KENWOOD TWINS (R599D,T599D,S599)
Sold as a unit ONLY.
\$295

HEATH APACHE (TX-1) TRANSMITTER
100-pounds ! (PICK-UP ONLY!)
\$150

DRAKE R4B (Works but as is!)
\$100

REALISTIC HTX-100 10-METER XCVR
\$125

REALISTIC TRC-219 CB 3-Channel HandiTalkies
QTY - 2
\$20 for Both

Accessories:

Palomar Tuner-Tuner	\$ 50
MFJ Artificial RF Ground	50
MFJ 3KW Antenna Tuner	140
MFJ Grandfather Keyer	90
Autek Keyer	60
Gates Sta-Level Audio Compressor/Limiter..	60
Dukane Audio Compressor/Limiter.....	45

Shipping extra for non-pickup deals.

Roy C. Pollitt
98 E. Pond Circle
Keenwick Sound
Fenwick Island DE

(302) 436-2296
Best time to call - after 6PM

or e-mail with questions, wants, etc.

From boatanchors@theporch.com Tue Jan 30 08:18:23 1996
From: "Roy C. Pollitt" <76161.2377@compuserve.com>
Subject: FS: Electric Radio Magazines
Message-ID: <960129210507_76161.2377_GHM140-1@CompuServe.COM>

FOR SALE:

ELECTRIC RADIO Magazine
ALL ISSUES SINCE THE BEGINNING !!!
1989-1994 (Each Year library bound)
Extra DEC 1994 issue
1995 Individual unbound issues.

\$ 160 (I'll pay shipping)

E-Mail that you want them and I'll
e-mail back if you are the first taker.
(I'll reply even if you aren't.)

Roy C. Pollitt KD4HC

From boatanchors@theporch.com Tue Jan 30 08:18:23 1996
From: "Gary H. Harmon, Jr." <gharmon@txdirect.net>
Subject: Hallicrafters S-85
Message-ID: <199601301216.GAA26011@legend.txdirect.net>

Hi Gang. Picked up a very nice S-85 last weekend. Super shape except for the fact that some bozo mounted a s-meter in the front panel where the 'h' used to be, and one small knob is different.

1. Any recommendations on repairing the panel if the s-meter is removed? How about a good spare front panel?
2. Anybody have an extra knob for sale?
3. Anybody have a manual they could copy for me.

Thanks in advance for any and all recommendations. 73, GARY

=====

need to be terrific.

Still, it is fascinatin', glowing in the dark with the dial oscillating back and forth...

From boatanchors@theporch.com Tue Jan 30 19:16:11 1996
From: lkayser@WorldLink.ca (Larry Kayser)
Subject: Ham gear to WWII & OSS rig
Message-ID: <9601302211.AB09539@beacon.WorldLink.ca>

I was a might young for WWII, my diapers being still changed at the start of it but when I did get into amateur radio in the 50's I found very few old crystals that I could buy or scrounge from the locals.

This interested me, and I found out that quartz was in big time shortage in WWII and that each amateur in this country was canvassed to see if they had old crystals. If they did, they would be paid something like a \$1 for them or a receipt if they were donated. A lot of great boatanchor crystals disappeared that way. When I asked about this among the locals, one chap dug out a newspaper article of the day about a local Medical Doctor who was found to have a very large piece of quartz, about 6 Kilograms if I remember. He was one of only a few Canadian civilians to have a new car during the war - in exchange for the giant piece of quartz. (It wasnt all bad, Doctors needed cars anyways)

In the last few days I have been tracing back on some history of the OSS suitcase radio, AR-11. One particular history I have found was a project that went after quartz (for radio crystal manufacture) in South America. The countries involved, were nominally neutral, did not facilitate supplying war materials so a fair degree of subtrafuge was involved. Interestingly, the Germans, British, and Americans were all after the same supplies of quartz at the same time. Has anyone seen an AR-11 on the market recently?

A final point, in Canada and I suspect in the US, a lot of TX's were gathered up under the guise of contributing to the war effort. The real strategy was I suspect to get a lot of transmitters out of circulation.....

Larry
va3lk / wa3zia

From boatanchors@theporch.com Tue Jan 30 19:16:11 1996
From: okasb@shoe.mtv.gtepsc.com (Bob Okas)
Subject: Heath IB-1102 infor sought

Message-ID: <9601301920.AA05910@shoe.mtv.gtegsc.com>

Hello All,

This may be a bit off topic, but I am in need of a manual for a Heath IB-1102 frequency counter (Hey, it **does** have Nixie tubes in it!). I'll gladly pay reasonable copying/shipping charges.

I picked it up a while ago and finally got around to looking at it last night. The clock and display boards appear to be functioning OK, but the front end board bears the scars of former repairs.

Thanks,
Bob - N3MBY

From boatanchors@theporch.com Tue Jan 30 19:16:11 1996
From: Michael.J.Knudsen@att.com
Subject: Re: Heath VF-1 VFO Plate voltage
Message-ID: <9601302332.AA04662@pilsner.ih.att.com>

I had a VF-1 35 years ago, as K3JVK, but right now if I needed that info, I'd look in that new picture book of Heathkit ham gear. I just bought it two days ago at the Wheaton hamfest. It's a terrific read -- like Playboy, the text is as good as the photos, well maybe even better in this case. And the voltage and current needs are given for all the "leach" accessories like VFOs, Q multipliers, etc.

This is a book you'll stay up past your bedtime reading, and turn to again and again as a reference.
Email me if you still need the VF-1 data.
(Or would sell me that neat old piece). 73, mike k w9nrd/ae

From boatanchors@theporch.com Tue Jan 30 12:33:42 1996
From: BRIDGERS@gonzo.ccl.org
Subject: Hickok 600A - need help reviving it!
Message-ID: <960130092024.20406754@gonzo.ccl.org>

Along about the time of the recent post about the 600A, mine bit the dust. It dropped dead while I was in the midst of testing a 6EA8 from my TR4. What happened was I had mis-set the Bias. When I pressed P4, the meter went all the way to full right scale dropped back ... and forever has stayed that way --- except when I test the line voltage.

And then the meter works; so the meter is ok.

And I checked the Bias fuse lamp; it is ok.

So ... I sez ... must be the 83 or 5Y3: replaced them both. Result?

Same as before ... I get nothing when I press P4 with a tube under test.

What the heck else could it be? I'm right in the midst of several projects and I desperately need to get my 600A working. Would appreciate any help you all could provide... I hope someone has been there, done that, fixed it!

73's Tom KE4RHH Bridgers@Leaders.ccl.org

From boatanchors@theporch.com Tue Jan 30 19:16:11 1996

From: Richard E Robinson <rerobins@uncc.edu>

Subject: Re: Hickok 600A - need help reviving it!

Message-ID: <199601302143.QAA03442@unccsun.uncc.edu>

I have 2 files I received from Dan Schoo, the Hickok guru who hangs out on rec.antiques.radio+phono. One file deals with basic operation and one deals with calibration of the 600 series testers. If I can find them I'll post them with Dan's permission.

Rick Robinson kf4ar

rerobins@uncc.edu

From boatanchors@theporch.com Tue Jan 30 19:16:11 1996

From: steve@hi.com (Steve Byan)

Subject: Re: Hickok Tester

Message-ID: <v0213050aad3405fe71b9@[140.243.30.128]>

>If you have information from Hickok on calibration or if you have
>developed your own procedure, I and others here would be delighted to
>learn more.

Antique Radio Classified has recently run a few short articles by Alan Douglas on tubetesters. In the November or December issue, he describes a calibration procedure for Hickok testers. I'll try to find it and post it here, but if someone else has the issue handy, please go ahead.

I'll also have to go have a look at the TV-2 calibration procedure. As I recall, it specified measuring the transconductance of a variety of sample tubes on a ME-<mumble> tube transconductance meter, and then twiddling the TV-2 until it read the same! I'll have to look up the military number for the tube transconductance meter in the TM. Would be an interesting piece of equipment to acquire.

Regards,

-Steve

Steve Byan	internet: steve@hi.com
Hitachi Computer Products (America), Inc.	
1601 Trapelo Road	phone: (617) 890-0444
Waltham, MA 02154	FAX: (617) 890-4998

From boatanchors@theporch.com Tue Jan 30 08:18:23 1996
From: Andy Wallace <wallace@mc.com>
Subject: <http://www.zynet.com/~johnb>
Message-ID: <9601301302.AA01897@taku>

I visited John Brewer's site last night. Great job,
John! It gives me the inspiration to mail some pictures
of my ugly mug and pretty radios. Kudos to
the contributors.

--Andy
wallace@mc.com

From boatanchors@theporch.com Tue Jan 30 19:16:11 1996
From: Joe Spencer <jspencer@metronet.com>
Subject: Re: License Exams
Message-ID: <Pine.HPP.3.90.960130125115.3395B-100000@fohnix.metronet.com>

Hi Ray,
It is not very close but there are weekly test here in the metroplex, and
specifically here in Arlington there are two testing sites nearly every week.
each Monday evening at 7pm, and 2nd and 4th Saturdays at 10am.
Let me know if you want directions.
Good luck with you test wherever you take it.
Joe KK5NA

On Mon, 29 Jan 1996 mack@mails.imed.com wrote:

> Does anyone know of any license exam sessions in the Houston or
> southeast Texas area in the immediate future?
>
> I have my code speed up and I want to get to a test before I loose it
> again. The closest one I know of is Victoria on March 9. I'd rather
> not wait that long!
>
> Thanks.

>
> Ray Mack
> WD5IFS
> mack@mails.imed.com
>

From boatanchors@theporch.com Tue Jan 30 19:16:11 1996
From: dma@IslandNet.com (Jan Skirrow)
Subject: Military Radios Source
Message-ID: <m0thQDr-0005bRC@island.amtsgi.bc.ca>

The following advertises as specilizing in military surplus radios (buy, sell, trade, service) and in No. 19 sets in particular. I have not dealt with them, and know nothing about them other than:

E2 Electronic Enterprises
131 Gibson St.
Parry Sound, Ontario, Canada, P2A 1X8
Tel: 705-746-1376
Fax: 705-746-1570

If anyone knows any more about them, I'd like to know your experience.

Jan Skirrow, VE7DJX
dma@islandnet.com

From boatanchors@theporch.com Tue Jan 30 12:33:42 1996
From: Bill Sorsby <bill.sorsby@dlep1.itg.ti.com>
Subject: Modifications and Customizing
Message-ID: <199601301453.IAA25364@dlep1.itg.ti.com>

Greetings;

After reading all the modification/customization bashing posts recently, just thought I'd provide an alternative viewpoint. Some of the reasons cited for collecting BoatAnchors, such as rarity and the fact that they tell a story are even more true of customized and modified equipment.

This fact manifested itself with an old BC-1004 SuperPro I acquired this past weekend. (Courtesy of BoatAnchorite Robert Downs.) A previous owner had added a product detector, voltage regulator tubes, replaced the RF amplifier. oscillator and mixer octal tubes with miniature tubes and rewired a few others. The set's in very good condition and very clean, the work done was first class, the front panel was repainted and an attractive S-meter replaced the original. This old SuperPro

still needs some TLC although it mostly works just fine. Only real concern I have with it is not having a complete schematic, but that's more an annoyance than a hindrance.

I like the old beast. It tells a story of someone who invested many hours of effort meticulously modernizing an old surplus radio. I even imagine that this was, in fact, his main radio for years. I can relate since I used an old BC-779-B for the better part of five years after getting my ham ticket. It even makes me wish I'd been able to make the same sort of mods to my old BC-779-B.

IMHO, not all modifications automatically relegate equipment to parts status. Many modifications were well thought out, meticulously implemented and resulted in genuine improvements to the equipment. And, if you're looking for rarity..., it's hard to beat one-of-a-kind.

Regards,
Bill Sorsby, N5BU

bill.sorsby@dlep1.itg.ti.com
Views expressed herein are no one's fault but mine.

From boatanchors@theporch.com Tue Jan 30 19:16:11 1996
From: dsnowden@ccd.harris.com (Doug Snowden)
Subject: My New Scope
Message-ID: <9601301926.AA246566@rs2.ccd.harris.com>

I finally am going to buy a scope to look at all those signals instead of a RF probe. The scope I am buying is a Tektronix 7834 storage scope. I see that it will take different plug in units. My question is: Is the 7D14 counter unit a worthwhile addition? I have never seen one, but the manual seems to indicate it might be worthwhile. Does it work as a regular frequency counter would work? Also, if its worthwhile, any suggestions (other than hamfests) to look for one?

73 Doug, N4IJ dsnowden@ccd.harris.com

p.s., where is that sale/wanted list located? I can't find the info here.

From boatanchors@theporch.com Tue Jan 30 19:16:11 1996
From: "William L. Fuqua III" <wlfuqu00@service1.uky.edu>
Subject: Need J-45 key
Message-ID: <199601302134.QAA22203@service1.cc.uky.edu>

A friend of mine is looking for a J-45 kew w/ leg mount.
He saw mine and just has got to get his very own. He used
one in the army years ago.

73

Bill ko4ww

William L. Fuqua III P.E.
Department of Physics and Astronomy
CP-177 Chem. Phys. Bldg.
University of Kentucky
Lexington, Ky 40506-0055
E-mail WLFUQU00@POP.UKY.EDU
Phone (606) 257-4155

From boatanchors@theporch.com Tue Jan 30 12:33:42 1996
From: pbock@melpar.esys.com (Paul H. Bock)
Subject: New Vibroplex Original Standard
Message-ID: <9601301448.AA09442@syseng1.se.melpar.esys.com>

Following is a note sent to Mitch, WA40SR, President of
The Vibroplex Company, Inc. If you want a nice bug to *USE* in
your shack, you can't do any better than to buy a new Original
(Standard, Deluxe, Presentation, or Gold) from Mitch!

>Mitch,

> The new bug (#101475) arrived safely yesterday. Beautifully
>finished, flawless appearance, and I *REALLY* like that textured
>black base paint; it looks very durable. Got her adjusted up and
>spent some time trying out the "feel," and she's definitely a
>lady with nice manners.

> My '63 Presentation is now officially "retired" from the
>main shack and resting peacefully amongst my collection with her
>older siblings.

73,

Paul, K4MSG

From boatanchors@theporch.com Tue Jan 30 08:18:23 1996
From: n5off@w5ddl.aara.org
Subject: Old Janes and TRD-15 Anyone?
Message-ID: <286280@w5ddl.aara.org>

Does anyone have an old Janes Mil Communications which describes the TRD-15 system (direction finding).

If so, please respond here.

Thanks in advance.

Tom

Reply to:

packet	n5off@k5arh.#lft.la.usa.noam
Email (home)	n5off@w5ddl.aara.org@usl.edu
Email (work)	tfma@chevron.com

Lafayette, LA

office 318-989-3430

home 318-984-2561

From boatanchors@theporch.com Tue Jan 30 12:33:42 1996
From: BRIDGERS@gonzo.ccl.org
Subject: Organizing Postings...
Message-ID: <960130092817.20406754@gonzo.ccl.org>

I now have a 5" tall stack of papers containing the postings to Boatanchors that I want to retain for future reference. But here is my problem, I am 54 yrs old and my memory is not what it used to be. So I have a growing number of things I want to access in my Boatanchor stack and a declining ability to remember what the heck is in the stack. And I'd just as soon not rummage thru the stack each time I want something. Isn't there a better way for me to do this using modern PC tools? Surely there are some better ways to get at this terrific info than the way I'm doing it. Any help with my dilemma would be appreciated.

73's Tom KE4RHH Bridgers@Leaders.ccl.org

From boatanchors@theporch.com Tue Jan 30 19:16:11 1996
From: doonan@cordmc.dnet.etn.com (DENNIS DOONAN X6916 (KG9D0))
Subject: RE: Organizing Postings...
Message-ID: <9601301755.AA19047@etn.com>

Tom,

I do not try to organise the postings on a computer. I retrieved a pile of manilla folders out of the dumpster at work. I try to file each

one on a specific topic: AVC circuits, antenna couplers, 75A-3, HRO-5, etc. If there is any doubt about the topic, I run a xerox of it and file it in both places. My file cabinets are mostly filled with manuals, so these folders are stored in th4 cardboard boxes copy paper comes in. (You could buy those banker's boxes--if you had to).

It works pretty well. My single Collins folder has grown to over a dozen. It is easy to expand. If there is a magazine article I know I'll "need some day", it gets xeroxed and placed in this file also. I've used this system, more or less, for the past 30 years (I started REAL young :>).

73 de Dennis, KG9DO doonan@cordmc.dnet.etn.com

From boatanchors@theporch.com Tue Jan 30 19:16:11 1996

From: merrigan@ee.ualberta.ca

Subject: Re: Organizing Postings...

Message-ID: <199601302141.PAA07723@uro.theporch.com>

I originally drafted this as a personal reply to Tom, but there seems to be a bit of interest, so I'll repost to all:

>Surely

>there are some better ways to get at this terrific info than the way I'm

>doing it. Any help with my dilemma would be appreciated.

>73's Tom KE4RHH Bridgers@Leaders.ccl.org

Tom:

Well, I have been on the trail of a good free form intuitive database program for several years. I have tried everything from commercial products to shareware (at least 10-20 products).

There are several ways you can go. First, there are some mail readers which offer database capabilities, which means you can archive your messages from within your mail program, and the best of these is ROBOMail. It is still a DOS product (though a windows version is in the works) but it is definitely the most powerful and flexible mail reader I have seen. Just do a search for RoboMail on your favorite BBS.

Sticking with mail readers, if you want a windows interface, go with CMPQWK from Dangerous Cybernetics. This product comes close to Robomail under a Windows interface. With OS/2 (like me) go with MR/2 ICE mailreader. Extremely sophisticated, fast, and versatile. All of these programs are shareware, so you can "try before you buy". They will be available on any large BBS.

The other route you can go, (which is what I have done) is to use an free form, text database program to organize postings, parts of postings, text files, data files, etc. I have found a dandy, inexpensive and extremely powerful program for this purpose. It is a windows base program called InfoSnatch. Here is the file_id.diz blurb:

InfoSnatch(TM) v1.2 Gather information from ANY Windows-based software. Just copy text or a graphic to the clipboard and InfoSnatch will snatch it and let you store it in any InfoSnatch Library. The Agent X utility will search for text in files unattended! View and search HTML, WinCIM, ZIP files, or ANY file that contains text. MANY more features. 16 bit, but optimized for Win 95. A MUST for FAQ writers/journalists/surfers. Shareware.

InfoSnatch uses a "library-notebook-note" hierarchy for organization. BUT, you can give everything (libraries, notebook and individual notes) long, long descriptions. So I have a library dedicated to boatanchors, which has notebooks for R390A, R388, SP600, TEK Scopes, Tube Theory , etc, etc, . And in these notebooks, I store the information I glean from the BA list, and other sources. Infosnatch can import data from almost any type of file, (text, delimited, database), and create notes or notebooks, automatically titling notes for you. It can also work in the background, grabbing information from the windows or OS/2 clipboard as you paste it there. Each time you paste, you can get a new note, in the notebook and library of your choice. I found this program intuitive and very easy to use, and extremely powerful.

All my BA information (approaching 2Mb worth) is organized with InfoSnatch.

You can find this program on Compuserve, in the Journalism forum (go jforum). You will have to do a library search to find out which library it is in (I believe it is library 4). Or, the author has a WWW home page at: <http://ourworld.compuserve.com/homepages/zoot> .

The conclusion is, with a good mailreader and a good free form database, you can have all the BA (or any text information) literally at your fingertips.

Shaun

--

merrigan@ee.ualberta.ca
University of Alberta
Edmonton, Alberta

From boatanchors@theporch.com Tue Jan 30 19:16:11 1996
From: Bob Roehrig <broehrig@admin.aurora.edu>
Subject: RE: Organizing Postings...
Message-ID: <Pine.ULT.3.91.960130160902.15694A-1000000@admin.aurora.edu>

On Tue, 30 Jan 1996, DENNIS DOONAN X6916 wrote:

> Tom,
> I do not try to organise the postings on a computer. I retrieved a
> pile of manilla folders out of the dumpster at work. I try to file each
> one on a specific topic: AVC circuits, antenna couplers, 75A-3, HR0-5, etc.

I do the same thing with all my QST and 73 magazines. I rip out the stuff
I am interested in and scrap the rest of the mag. I file the stuff by topic
(ant tuners, baluns, VHF antennas, HF antennas, etc.....) Sure saves time
looking for something.

E-mail broehrig@admin.aurora.edu 73 de Bob, K9EUI

From boatanchors@theporch.com Tue Jan 30 19:16:11 1996
From: merrigan@ee.ualberta.ca
Subject: RE: Organizing Postings...
Message-ID: <199601302216.QAA09245@uro.theporch.com>

In <Pine.ULT.3.91.960130160902.15694A-1000000@admin.aurora.edu>, on
01/30/96 at 04:09 PM,
Bob Roehrig <broehrig@admin.aurora.edu> said:

>On Tue, 30 Jan 1996, DENNIS DOONAN X6916 wrote:

e

>I do the same thing with all my QST and 73 magazines. I rip out the stuff
>I am interested in and scrap the rest of the mag. I file the stuff by
>topic (ant tuners, baluns, VHF antennas, HF antennas, etc.....) Sure
>saves time looking for something.

Next on my hardware list is a scanner/OCR combo, and oh, maybe 4 more Gb of hard drive space :-) I wonder why???

shaun

--

merrigan@ee.ualberta.ca
University of Alberta
Edmonton, Alberta

From boatanchors@theporch.com Tue Jan 30 19:16:11 1996
From: azoth@netcom.com (Az0th)
Subject: Re: Organizing Postings...
Message-ID: <199601302337.SAA12511@netcom6.netcom.com>

Hiyall,

> I now have a 5" tall stack of papers containing the postings to
..
> Isn't there a better way for me to do this using modern PC tools? Surely
> there are some better ways to get at this terrific info than the way I'm
> doing it. Any help with my dilemma would be appreciated.

Call me old-fashioned, but I really like to leave electronic text just where I find it: on the machinery. I keep a local copy of the BA archives on a Sun workstation at the office, having moved it there from an older Apollo workstation. Both speak Un*x, and are fairly quick, so when I want to see what the BAL wisdom is on a subject, eg HT-32's, I just do 'grep HT-32 *.ba' in my archive directory, pipe the output into a pager with a '|more' and using either 'ce' on the Apollo or 'ceterm' on the Sun, just click on each likely looking candidate, and the editor reads the archive name and line number, and opens the file in a new pad and moves to the right spot. I can scan every mention, in context, of any topic in a matter of minutes, and paste anything useful wherever I need it.

It shouldn't be too hard to pipe the grep output into awk or something that would extract and copy entire articles containing the search string, and shove that into more instead, or out to a printer, but these are just details. The searching itself is trivially easy, within the limits of unstructured textual data, and ought to be acceptably fast for a few years yet.

I have a large subset of the archives on my home machine as well, and use

similar tools. On DOS, I use a Brief editor which can load dozens of files at once, and search across file boundaries. I start it with a file list extracted from the output of a DOS grep.... You could get by nicely with just a grep and a 'list' program, of which there are many. Grep is a great search engine, and has been around for ages, but there are many similar programs. I'll bet somebody could even do it on a Mac, but it won't be me; most Macs don't grok grep.

My point is this: computer systems actually do very, very few things in and of themselves, but they do those things very well indeed; storing, sorting and searching data are why they were invented. The entire set of BA archives amounts to something less than 100 megabytes, uncompressed, and using Pkzip and some zip-smart search tools, could use a lot less and still be accessible, even on a small machine.

Another solution which I haven't yet pursued, but will, is loading the entire set of archives into a threaded newsreader like tin, as a newsbatch, so I can take advantage of the threading, which visibly joins all articles on the same topic in a hierarchical fashion. Once tin builds its own indices, its pretty quick, too, and has some useful search features. One of these days...

IMHO, FWIW, etc.

Cheers es 73
de KF4FJH - RF Buchanan (azoth@netcom.com)

From boatanchors@theporch.com Tue Jan 30 19:16:11 1996
From: Jeffrey Herman <jherman@hawaii.edu>
Subject: RE: Organizing Postings...
Message-ID: <Pine.SV4.3.91.960130144809.11571B-100000@uhunix3>

On Tue, 30 Jan 1996, Bob Roehrig wrote:

> I do the same thing with all my QST and 73 magazines. I rip out the stuff
> I am interested in and scrap the rest of the mag. I file the stuff by topic
> (ant tuners, baluns, VHF antennas, HF antennas, etc.....) Sure saves time
> looking for something.

Ouch! Rather than ripping up your mags why not use the annual index that appears in the December QST? As for 73, if there is no yearly index, just make your own on a monthly basis using index cards and a small file box.

Just as we enjoy reading the ads in our mags from 20-30 years ago

now, you'll surely want to read today's ads at some time in the future, so don't rip up your periodicals!

Jeff NH6IL

From boatanchors@theporch.com Tue Jan 30 12:33:42 1996
From: Michael.J.Knudsen@att.com
Subject: Re: R-392 Question(s)
Message-ID: <9601301716.AA06821@bock.ih.att.com>

I haven't found this bug in my R392 (love this little set!), but it may be related to something I found the other night. When listening to SSB, if I let the RF gain get too high, the signal doesn't just start to distort as in any rx without a PD, but instead there's a threshold, such that whenever a voice peak crosses that level, I get some serious crakling noise along with the voice peaks.

My guess is that some IF stage is getting prodded into self-oscillation. Or maybe, in your case, the first mixer. Maybe our problems have a common cause. I forget what band I had the SSB troubles on, but if it was after dark it must have been below 8 MC (20m really stinks lately).

I congratulate you on your skills in dis- and re-assembling this jewel of the clockmaker's art. I haven't needed to yet. Don't you love the shafts that run thru one subchassis just to get to some other section?

I hobody parts out an R392 unless it's really in sad shape (but you do need the parts). Xtals should be easy to get; I think they're all integer MHz. (hobody == hope nobody).

My '92 is every bit the equal of the R390A and sounds better, but I agree it slips a bit on the high freqs. I'm only using 25 VDC on the filaments, with 30-40V on the plates whenever I feel like splicing the extra supply in. 73, mike k w9nrd/ae

From boatanchors@theporch.com Tue Jan 30 08:18:23 1996
From: Steve Ellington <n41q@iglou.com>
Subject: R392 and T-195 found
Message-ID: <Pine.SOL.3.91.960129230054.16402A-100000@iglou>

I went to the St. Charles, Mo. fest Saturday. A fellow had a beautiful pair of R-392 and its mate the T-195 for sale. They were original all the way and had been used recently on the air. He had all the interface cables too. Price was \$400. I came close to buying them. I did get his BC-348 which is a beauty. If anyone is interested in them, I'll be glad

to pass along his phone number. I doubt if they were sold.

Steve Ellington N4LQ@IGLOU.COM Louisville, Ky

From boatanchors@theporch.com Tue Jan 30 08:18:23 1996
From: KC5IJD@aol.com
Subject: Re: R392 and T-195 found
Message-ID: <960130072215_209943597@mail04.mail.aol.com>

>I went to the St. Charles, Mo. fest Saturday. A fellow had a beautiful
>pair of R-392 and its mate the T-195 for sale. Price was \$400.
I came close to buying them. If anyone is interested in them, I'll be
glad
>to pass along his phone number. I doubt if they were sold.

He has been posting these for some time on the 'Old Gear, Junk, Amplifier
net' run on Saturday morning. I am surprised someone hasn't bought them.

73

Joseph W Pinner
Lafayette, LA
KC5IJD
EMail: kc5ijd@aol.com

From boatanchors@theporch.com Tue Jan 30 08:18:23 1996
From: David Stinson <72227.1640@compuserve.com>
Subject: Re: Radioactive Tubes
Message-ID: <960130114351_72227.1640_EHM57-7@CompuServe.COM>

> Both the OA2 and OB2 have the radioactive warning symbol.
Unless you break the tubes in a paper bag, then put it to your
face and inhale for a few minutes, or eat the glass, the
trace amounts of rare earths used in the tubes are no problem.
The media has induced an hysteria about anything nuclear.
You'd be surprised at the everyday things, sitting
within a few feet of you right now, that are radioactive.
I promise...no mushroom clouds in your BA!

73 DE Dave Stinson AB5S/7
72227.1640@compuserve.com

From boatanchors@theporch.com Tue Jan 30 12:33:42 1996
From: Scott_Johnson-AZAX60@email.sps.mot.com
Subject: RE>Re- Radioactive Tubes
Message-ID: <"Macintosh */PRMD=MOT/ADMD=MOT/C=US/"@MHS>

RE>Re: Radioactive Tubes 1/30/96
How about every day things such as lantern mantles and smoke detectors? Why worry. Life is too short.

Scott

You'd be surprised at the everyday things, sitting within a few feet of you right now, that are radioactive. I promise...no mushroom clouds in your BA!

From boatanchors@theporch.com Tue Jan 30 19:16:11 1996
From: Scott_Johnson-AZAX60@email.sps.mot.com
Subject: RE>Re- WWII german tube ID
Message-ID: <"Macintosh */PRMD=MOT/ADMD=MOT/C=US/"@MHS>

RE>Re: WWII german tube ID help? 1/30/96
sounds like a RV2P800 (receiving valve, 2V fil, pentode, mU of 800)

Scott

From boatanchors@theporch.com Tue Jan 30 08:18:23 1996
From: MODSTEPH@ACS.EKU.EDU
Subject: Re: Secret War series and book
Message-ID: <01I0LN11AYGI006C2S@ACS.EKU.EDU>

Argh!!!

I hit the delete when I did not intend to...

Could I get a repeat on the "Secret War" series/tapes, and what was

the name of that book besides (author if possible) - might turn up something...

73, A1 N5AIT
modsteph@acs.eku.edu

From boatanchors@theporch.com Tue Jan 30 12:33:42 1996
From: midshires@cix.compulink.co.uk (Andrew Emmerson)
Subject: Re: Secret War series and book
Message-ID: <memo.303994@cix.compulink.co.uk>

In-Reply-To: <01I0LN11AYGI006C2S@ACS.EKU.EDU>
>Could I get a repeat on the "Secret War" series/tapes, and what was the name of that book besides (author if possible)?

Good point, because some misinformation has been published here already.

The TV series was called "The Secret War" and was transmitted by the BBC. It is sold as a set of four videocassettes here in Europe by BBC Enterprises.

The companion book of the series was also called "The Secret War" and was written by the programmes' producer, Brian Johnson. The thrust of this book and the TV series was secret technology in WW2.

The book which started it all off was "Most Secret War" by Prof. R.V. Jones and covered the broader field of scientific intelligence during WW2. In the USA this was published under the title "The Wizard War" because the pun of the English title would be lost on most Americans. This is because when we entered the war, our security classifications were CONFIDENTIAL, RESTRICTED, SECRET and MOST SECRET. In the USA, many people apparently use the most as an abbreviation for almost and so MOST SECRET would not have the same degree of urgency there -- the American designation was TOP SECRET and some time after the Americans entered the war, we Brits had to adopt this designation to avoid confusion!

Just like we reluctantly dropped the abbreviation RDF (radio direction finding) in favour of the American RADAR, in fact. I could go on about two nations divided by a common language but I'd better not. I'll just wind up by saying both books (and the tapes) are superb productions and well worth getting hold of.
--Andy.

From boatanchors@theporch.com Tue Jan 30 12:33:42 1996

From: Richard Biddle <rbiddle@madvax.mo.ti.com>
Subject: Spare R-390A RF deck from Fair Radio
Message-ID: <310E324B.3458@madvax.mo.ti.com>

A famous philosopher once said of the R-390(A): "Don't mess with the gears. They were put together by elves. And all the elves are dead."

That having been said, my overhaul of a recently purchased R-390A ran into a snag with a bandswitching problem in the RF deck. After carefull reading of the manual which basicly said "It works like this. If it doesn't work like this, make it work like this.", I decided to order a spare RF deck from Fair Radio. I had hoped to use it as a drop in replacement for the one in the radio, but this was not to be.

If you are considering the purchase of a spare RF deck, I though you might be interested in what you get for your \$35.00. The one I received is an Electronic Assistance Corporation creation. Fair sells these "as-is" mostly complete except for the tubes, counter, and crystal oven. They were removed from Radios by dear old Uncle Sam. All the slugs, gears, and springs were there. I thought I was home free until I noticed a missing gear clamp. On a gear that requires removing the cover plate and several other gears to allow access. Before attempting this feat, I spent a half hour or so turning knobs and watching how the gears and switching worked. It didn't look any worse than a motorcycle transmission so I attacked. The actual tear down and reassembly instructions in the manual aren't too bad. All in all the RF deck was in very good condition (except the one missing clamp). The gears were all clean - not grunged up - and there was a minimal amount of oxidation of the springs. After rereading the manual, I managed to get things synched back up (more or less). Three hands required to accomplish reassembly (I knew I had kids for a reason.)

Using my new found knowledge, I located the offending adjustment in the R-390A - it wasn't the RF bandswitch, but the intermittent gear. It now appears to switch properly but I still

need to pull the RF deck and align the wafer switch contacts dead center and tweak the alignment.

The previously dead bands are now pretty much functional.

Bottom line - for \$35.00 the spare RF deck appears to be a good value. Since gears go for \$3.00 or \$6.00 each, clamps for \$3.00 or \$1.50, and slugs \$3.00, you can come up with a heck of a lot of spare parts.

In the same vein, I was once speaking to a old Navy ET here at work. He retired as a CPO after he put in his 20. I asked him about his shipboard experiences and the "secret" to working on mil gear. His answer - "Liberal application of profanities directed at the equipment and the company who designed it." In messing with this critter, it appears he was right.

Standard disclaimers apply. YMMV.

73 de Richard, KB5WLH
rbiddle@madvax.mo.ti.com
(Who's \$12 boatanchor "repeater fee" was sent in last week.)

From boatanchors@theporch.com Tue Jan 30 19:16:11 1996
From: 7914@mne.net (Michael Rivkin)
Subject: SSB on R-390A
Message-ID: <9601302247.AA29835@mne.net>

Well, after reading this list for couple of months, I finally got my "new" R-390A from Miltronics (Rick Mish) and it is a beauty "Mint" condition with great sound, and it is my first BA (I do have a ss receiver)

My question is simply--what would be the best external SSB adaptor for the R-390A. I do not want to do any internal mods because I quite honestly can't!

Any and all advise would be appreciated.

Thanks
Mike Rivkin
7914@mne.net

From boatanchors@theporch.com Tue Jan 30 08:18:23 1996
From: "Howard R. Weeks" <weeksh@csranet.com>
Subject: RE: Swantenna 55B Motor needed.

Message-ID: <199601300358.WAA15807@csranet.com>

Another choice is the small power screw driver which has plenty of torque and is reversable.

Howard K5JCP
weeksh@csranet.com

From boatanchors@theporch.com Tue Jan 30 08:18:23 1996
From: "Craig Anderson - Ext. 1365" <CAnderso@smtp.stp.tec.mn.us>
Subject: Re: table radio
Message-ID: <310E4511@smtp.stp.tec.mn.us>

I have never heard of replacing the 6AL5 in the R390A with a 12BE6. Has anyone else done this? I always heard that even if the original 6AL5 was replaced, the calibration of the PT0 would have to be re-done because of the close relationship of the tubes internal characteristics to the linearity of the PT0, especially end point adjustment. I could be wrong about this so could someone clarify this who knows 390 and 390A PT0 calibration?

From: boatanchors
Subject: Re: table radio
From boatanchors@theporch.com Tue Jan 30 12:33:42 1996
From: "Shepard, Phil/NTSEUG" <pwshepar@sp-eug.com>
Subject: TO: KD4HC
Message-ID: <310E44D8@msmail.sp-eug.com>

1610 GMT
30 JAN 96

Roy,

Sorry for sending this to the entire list, but by the time postings show up in my MSMail folders, I have no idea what the originating email address was.

Anyway, assuming the ER mags are in good condition, I'll take them. Also, what kind of condition is the R4B in?

Phil Shepard, NS7P
pwshepar@sp-eug.com
(541)683-5701x3320 work
(541)935-3124 home

From boatanchors@theporch.com Tue Jan 30 12:33:42 1996

From: "Mark Glusker" <glusk@mechcad3.engr.sgi.com>
Subject: TRADE: '67 Tek catalog for HP catalog
Message-ID: <9601300733.ZM11494@mechcad3.engr.sgi.com>

I have a March 1967 Tektronix Oscilloscopes and Associated Instruments catalog (catalog #26, 320 pages) that I would like to trade for a Hewlett-Packard test equipment catalog of the same era. I would also purchase the HP catalog if a trade is not of interest.

Thanks,

Mark Glusker, glusk@sgi.com
(also looking for an HP-55 or HP-67 calculator)

From boatanchors@theporch.com Tue Jan 30 12:33:42 1996
From: "Gable, Edward M" <emg@rfpo2.rfc.comm.harris.com>
Subject: True Story HamRadio Goes to WAR
Message-ID: <310E54C1@smtpgate.rfc.comm.harris.com>

Several years ago I bought an unusual RCA ACR-165 Communications Rcvr at a local Garage Sale. Was a mess but showed promise and was five bucks. During the restoration I found a penciled call sign W8ABC. (I just made that up cuz I forgot what it really was) Now, New York used to be in the 8th call area before WW2. I took a chance and looked up W2ABC which is what his post-war call would be. Sure enough, there was a W2ABC in Sryacuse, NY. I Sent W2ABC a short post card saying I had this Rcvr and was it yours ? Soon after I got a long two page letter saying YES, that was my "new" RCA and he told me this story. He was off at work one day early in WW2, say '42, and his wife answered a knock at their door. Two people identified themselves as "G-Men" and asked to see her husband's Ham equipment. She showed them the only thing he had, the RCA . They turned it on, listened for a few minutes and then said "we'll take it." And they did! They gave her a receipt and that was it. In 1946 he got a US Govt check in the mail fairly covering the value of the rcvr. How it got to a garage sale in Rochester 50 years later we will never know. I don't know W2ABC at all and have no reason to doubt this story from a real Old Timer. I wonder if anyone else has heard of such tales.

73, Ed K2MP @ Rochester emg@rfc.comm.harris.com

for

From boatanchors@theporch.com Tue Jan 30 08:18:23 1996
From: Kim Herron <kherron@voyager.net>
Subject: Tubes for sale
Message-ID: <199601301332.IAA01810@vixa.voyager.net>

Hi Gang,

I have a several 6DQ6/A/B/6GW6's for sale. 45+ to be exact. That's a little more than I need. They make a good power output tube and were used for that very purpose by several different Transmitter manufacturers. These are Brand new tubes in boxes [RCA,GE,Sylvania]. AES is getting over 6 bbucks a piece for them, but I figured that the builders here, or people who have transmitters that use them deserve a chance at them. I'd like \$3.00 a piece or in quantities over 4, \$2.50 each. Shipping will probably run \$3.00 an order and anything over 6 tubes I'll ship free. Let me know.

Thanks

KIM

>
>
>

From boatanchors@theporch.com Tue Jan 30 12:33:42 1996
From: Jay Wicklund <jwicklun@halcyon.com>
Subject: Variable Cap repair???
Message-ID: <Chameleon.960130103102.jwicklun@mycroftxxx.halcyon.com>

Hi All, I'm looking for some advice on restoration. I recently acquired a Hammarlund HQ180. It's in very good condition cosmetically, and seems to work (although I only turned it on briefly to check). I plan to check everything out thoroughly before operating it much.

My problem/question concerns the variable capacitors. The radio originally came with shields over both the main, and bandsread caps - they are missing.

1. Did they really have much affect, or were they mostly for protection???
2. Also, the plates of some sections of the bandsread cap are very poorly centered - apparently they don't short, but its so close that I can't see the gap. Any hints on how to straighten them - or whether its even a good idea to try?

3. Also, on the cap plates again, there are tabs bent out of alignment, which I assume were meant to be adjusted, probably to make the dial calibrations more accurate over part of the range. Is this so, is there an easy way to do this process?? Trying to change those tabs looks like it would be a very, very time consuming task - adjust, realign, adjust, realign, etc.

Thanks for the assistance.....73 de KI7RH

p.s. Would also like to get the clock, but I probably have a lot of company in that desire...

Name: Jay Wicklund
Addr: 801 Duchess Road
Bothell, WA 98012, U.S.A.
E-mail: Jay Wicklund <jwicklun@halcyon.com>
From boatanchors@theporch.com Tue Jan 30 19:16:11 1996
From: John Kolb <jlkolb@cts.com>
Subject: Re: Variable Cap repair???
Message-ID: <Pine.SCO.3.91.960130154625.14740A-1000000@sd.cts.com>

On Tue, 30 Jan 1996, Jay Wicklund wrote:

> My problem/question concerns the variable capacitors. The radio originally
> came with shields over both the main, and bandspread caps - they are missing.
>
> 1. Did they really have much affect, or were they mostly for protection???

Protection against dust.

>
> 2. Also, the plates of some sections of the bandspread cap are very poorly
> centered - apparently they don't short, but its so close that I can't see the
> gap. Any hints on how to straighten them - or whether its even a good idea to
> try?
>

If there is a screw with a locknut at the back end of the cap, you could use that to shift the rotor one way or the other, but unless you have a problem with the cap, it's BEST not to touch it.

> 3. Also, on the cap plates again, there are tabs bent out of alignment, which
> I assume were meant to be adjusted, probably to make the dial calibrations
> more accurate over part of the range. Is this so, is there an easy way to do
> this process?? Trying to change those tabs looks like it would be a very, very
> time consuming task - adjust, realign, adjust, realign, etc.

Again, unless you see a bad problem with the dial accuracy, don't touch them. I had a HRO-500 once where a previous owner decided to make the dial

better. And indeed, he had managed to tweak it so that every 50 kHz (or was it a 25 k cal?) was right on. But in between the cal marks it was more than 5 kHz off. The clue was that if you look at the trim tabs, they should form a straight line or slow smooth curve. In this receiver, they looked like sawteeth. Took man-weeks to get them right again.

John Kolb KK6IL jlkolb@cts.com

From boatanchors@theporch.com Tue Jan 30 12:33:42 1996
From: "ROBERT W DOWNS, WA5CAB" <103012.2130@compuserve.com>
Subject: Re: VOLTAGE RATINGS OF MILITARY BOATANCHORS
Message-ID: <960130141621_103012.2130_GHU59-1@CompuServe.COM>

Group,

This was prompted by Steve's observation that part of his BC-348-0 is marked 24V and part 28V.

DC operated equipment designed for use in vehicles, aircraft or boats and small craft (but not ships) have to operate over the expected system voltage range. The storage battery in all these systems was (and mostly still is) lead acid, with a nominal voltage per cell of 2.1V. When the cells were combined into batteries, you got 6.3V, 12.6V and 25.2V (no load when fully charged). On charge, the charging voltage regulator is set to 13.8-14V or 26.6-28V. When partially discharge, the battery voltage will be around 12V or 24V.

Ground equipment is usually marked on the nameplates 12V or 24V, and aircraft gear is usually 14V or 28V. My only explanation for this is that an M-4 (Sherman) won't crash like a B-24 if you shut its engine off. Seriously, the ground gear would expect to be operated part of the time with the vehicle engine off, and the aircraft stuff normally wouldn't. Later, (mid Korean War) all military gear began to be marked 14V or 28V, I guess for consistency, or to prevent confused questions from the troops. A few pieces I've seen were marked 26V or 26.6V. Somebody was just being cute, I guess.

Also, technically a motor-generator consists of two separate units (a motor and a generator) coupled together by a coupling, belt, chain or gearbox. The Navy used to love motor-generator sets for its radio gear. A dynamotor is always smaller and lighter for the same power out.

73, Robert Downs, WA5CAB
103012.2130@compuserve.com

From boatanchors@theporch.com Tue Jan 30 08:18:23 1996
From: Michael.J.Knudsen@att.com
Subject: Wheaton (IL) Hamfest report
Message-ID: <9601292114.AA06373@bock.ih.att.com>

Yesterday (Super Sunday) was the annual Wheaton Community Radio Amateurs hamfest, held in Villa Park near Chicago. As a strictly indoor operation (enforced by 20 degree wx), it is usually BA-impaired, but I was able to spot a few goodies even tho I spent most of the time cooped up in the VE exam room (tho not complaining, for other reasons :-)

Right inside the door was a nice clean HQ-110 w/out clock, no price. By end of show asking was down to \$175, so I suspect \$150 wuda taken it. I'm holding out for a 180 so I passed, but I really think it deserved to go home for \$150.

Upstairs was an SX-71, very nice on the outside, one chipped knob, but pretty rusted and stained inside. Asking dropped from \$100 to \$75, then it finally went for who-knows-what. Other Hallis -- a dirty S-38 and some modern shiny entry-level ones were with it on the table. No prices marked, and whenever someone asked the seller what he wanted, he'd say "You really interested or just comparing prices?" Take a Prep-H, pal.

At end of show was a near-mint bunch of Drakes -- a T4X xcvr for \$350 and a TR4C rx with companion tx and spkr, with \$350 on the tx (sri I forget the model no) which MAY have covered the whole trio (I cna dream anyway). Unforch, the owner wasn't there! From what I've seen on this List some great Drake deals were missed.

Speaking of Drake, if anyone was trying to sell R8As or spread rumors of a re-entry into tx products, I didn't see it.

I saw quite a few ricebox xcvs, some with tube finals. Since I have a KWM-2 I'm not looking too hard for another, tho I wonder about that Drake and I'm on the prowl for an NCX-5 just cuz it's so neat inside. Saw some Heath SB-series too.

A few really nice BA signal generators, and also a Tek 561A scope plugged in and sweeping away on dual trace. At its \$195 price tag I decided not to join the ranks of Tek scope collectors, even tho Stan's excellent book was for sale nearby.

Saw no BA TX (other than the Drake above) at all. Did buy the books on Heath ham gear (great reading), the Pocket Guide to Collins (ditto ditto), and Meissner's How-to_build book of 1943

to complement my 1950+ edition.

Only non-book items that followed me home were a bag of 15 tubes, a dozen xtals, and a minitower PC cabinet (and guess who's been whining about too much PC stuff). No test gear, no radios.

Just a CSCE with a circle around the bottom-most entry (another story) so who's complaining? 73, mike k w9nrd/ae

From boatanchors@theporch.com Tue Jan 30 08:18:23 1996
From: Cosmo224@aol.com
Subject: Wheaton Fest addendum
Message-ID: <960129224434_307012508@emout06.mail.aol.com>

Howdy all

This is an addendum to the earlier Wheaton IL fest. Not much to add in terms of RX/TX sets since that is what I saw also. Not much in terms of military surplus. I did see one BC611 'attention getter' (was not for sale... I did a quick doubletake tho...). Also seen was a Watkins Johnson 205A and a couple of 977's - not firebottle but what I consider a vintage rig none-the-less... I did not see any heavy metal receivers (i.e. SP600's or R390's). There was

quite a bit of parts and stuff but a majority of the setups was the usual commercial gear/test equipment, consumer electronics garbage and computer poop. I did stop by the book display on the top floor which had a wealth of vintage radio books (Collins guide, communications receivers, etc...) plus books on crystal sets, tesla coils, and the like. No other unusual equipment was seen (sigh...) This fest was my microwave parts buying splurge so the only thing hauled home was a bunch of square plumbing, a dish, and some military surplus amps and mixers that my parents tax dollars were spent on...

73 de AA9IL
Mike Kana

From boatanchors@theporch.com Tue Jan 30 12:33:42 1996
From: John Shriver <jas@shiva.com>
Subject: Re: Which Patents??
Message-ID: <199601301648.LAA20670@shiva-dev.shiva.com>

From: merrigan@ee.ualberta.ca

Anyone who has an SP-600 has probably seen the patent disclosure which is stamped on the same plate as the serial number (on the top cover of the

variable capacitor shield box).

To quote: "This apparatus uses inventions of United States Patents licensed by the Radio Corp. of America and the Hazeltine Corporation

Patent Number Supplied upon Request"

So the question is, which patents was Hammerlund using??

RCA had an entire patent licensing division. They sent out catalogs of their patents you could license. If you licensed one, you got this (confidential) disclosure bulletin, which gave you useful information on how to apply the principles of the patents.

(I've seen some of this RCA patent licensing stuff for sale at recent fleamarkets here in New England.)

I'd expect that all the relevant licensing records have been destroyed in the various purges of RCA as they have gone through their contractions and acquisition death throes. Besides, I can't imagine that any of the patents are still in force, so it wouldn't matter to RCA (GE) anyways.

Remember that RCA was formed as a patent pool first and foremost. While they had a monopoly on most of the important radio patents, they would license them on "reasonable" terms.

From boatanchors@theporch.com Tue Jan 30 12:33:42 1996
From: Michael.J.Knudsen@att.com
Subject: Re: Which Patents??
Message-ID: <9601301706.AA06817@bock.ih.att.com>

Well, RCA was among other things a universal patent clearing house, that bought up patents and licensed them out, as well as developing some of their own thru research. Hazeltine ran his own lab and developed quite a few good circuits and techniques too. It's amazing some of the simple basic things we take for granted that were once covered by patents, like a tuned L-C circuit in the grid feed!

So that patent plate generically covers whatever patents were used inside the SP600. Some patent stickers in old radios actually list dozens of numbers. I'd expect that for a given model of radio, the maker would pay RCA and/or Hazeltine royalties only on the exact patents being used in that set. This patent list for the SP600 might not fit inside the radio (and that's saying something :-).

"Neutrodyne" covers a triode RF amp using negative feedback to cancel

out unwanted regeneration. Many TRF (pre-superhet) radios were neutrodyne -- each stage has a trimmer cap to adjust the feedback. Nowadays the technique is used mostly in transmitters (I'm way overdue to adjust the new neut. trimmer I had to replace in my KWM-2). Tetrodes and then pentodes pretty well wiped out net. in rx, except in VHF and of course sand-pellet circuits.

You are no way exaggerating about Patent Wars! The history of radio is full of skirmishes and major battles. Atwater Kent almost beat RCA (but RCA cut A-K a sweetheart deal on the side in order to keep their patents intact). RCA also got around Armstrong's FM patents long enuf to drive him to suicide, but his widow kept up the lawsuit and won. Many fascinating alternative radio circuits were cooked up just to get around patents.

Get the little book "Behind the Front Panel" on 1920s radio technology for some real scoop on patents -- and other books cover later stuff like RCA and Armstrong. Believe me, Luke beds down Princess Leia in Patent Wars -- sister, schmister. 73, mike k w9nrd/ae

From boatanchors@theporch.com Tue Jan 30 08:18:23 1996
From: "Richard L. Duell" <rduell@iac.net>
Subject: wii Ham stuff
Message-ID: <199601300334.WAA11903@great-miami.iac.net>

>Regarding the connection between hams and wwii I recall reading old qst's
>that asked for meters so the builders of radio gear could complete their
>contracts and get the gear to the troops. In fact, the cover had a picture
>of lots of meters with the headline "Your Meters Go To War"!

>--

>Michael Sullivan --- michael.s@kc2kj.k2nesoft.com

>

I just received a copy of an AR-88 manual to go with my CR-88 (haven't found any difference yet) courtesy of N4X0, who I think lurks this list. In the section titled "Circuit Arrangements" there is a paragraph titled "Tuning Meter." I quote,
"The necessary wires for connecting a tuning meter in the cathode circuit of the first I.F. tube have been included in the cable wiring. If and when meters become available, it will be a simple operation to install a tuning meter."

I didn't realize meters were in short supply during WWII until hearing about it here.

I wonder what element(s) of the tuning meter constrained the supply?

Perhaps it was
just the great volume needed all at once.

73, Rich - W5VDU

From boatanchors@theporch.com Tue Jan 30 12:33:42 1996
From: "Nickels, Bob" <RNickels@P16.IL50.micro.honeywell.com>
Subject: RE: wii Ham stuff
Message-ID: <310E4B3F@mail_gw.micro.honeywell.com>

W5VDU said, in regard to the RCA AR-88 manual:
> there is a paragraph titled "Tuning Meter." I quote, "The necessary wires
for connecting a >tuning meter in the cathode circuit of the first I.F. tube
have been included in the cable >wiring. If and when meters become
available, it will be a simple operation to install a tuning >meter."

My recent acquisition of an AR-88 from the UK confirms this...an
English-made meter had been mounted (not well enough to survive the voyage,
unfortunately) in the bezel cutout obviously intended for an S-meter. Ray
Moore's book shows only a light-colored graphic with the RCA logo in this
spot - evidently this is how the receivers were shipped, sans meters. I
confirmed that the circuit works properly with my Simpson 260 in 1ma
position.

This paragraph explains why the wiring looks vintage but the meter
definitely was not!

I guess this was the era when most homebrewed ham rigs shared one meter by
using closed-circuit phone jacks in various parts of the circuit where
measurements were needed. The cover of the Dec. issue of QST for either
1944 or 45 (can't remember!) featured a photo layout of various meters
donated by hams and the title "Your Meters Go to War!"

73, Bob - KE0T

rnickels@p16.il50.micro.honeywell.com

From boatanchors@theporch.com Tue Jan 30 12:33:42 1996
From: "Cal J. Eustaquio" <ceustaqu@violin.aix.calpoly.edu>
Subject: WTB: 30-L1
Message-ID: <Pine.A32.3.91.960130091413.78226A-100000@violin.aix.calpoly.edu>

Hi fellow glowbugs:

I'm looking for a nice condx 30-L1 amp. Winged or round (doesn't matter). Front panel must be at excellent. Cabinet can be scratched up (so long as all is there). Must be working (of course). Any response would be appreciated. Thanks. Cal, N6KYR.

From boatanchors@theporch.com Tue Jan 30 08:18:23 1996
From: Sandy Blaize <70401.134@compuserve.com>
Subject: WTB: 80 meter Xtals/blanks.
Message-ID: <960130041104_70401.134_IHD109-1@CompuServe.COM>

Looking for 80 meter FT-243 size crystals or blanks (quartz FT-243 size less the holders). Frequency range from about 3.35-3.6 Mhz. What have you out there?

73,
Sandy W5TVW

~~~~~  
Boat Anchors collected, restored, traded and used!

From boatanchors@theporch.com Tue Jan 30 08:18:23 1996  
From: berg stephen erik <z931086@corn.cso.niu.edu>  
Subject: Re: WWII german tube ID help?  
Message-ID: <Pine.3.89.9601292246.D11769-0100000@corn.cso.niu.edu>

I traded a WWII German receiver to a list member a while back that used these. It covered the range of 3 to 6 MCs, and had a 1 KC vernier dial, 4 frequency presets, and a magnified main dial scale. It had only 1 tube left in it. It was of the form mentioned in the preceeding post. It was sort of an acorn tube design. I hate to say it but it sure looked more sophisticated than our command sets.

73,  
Steve WA9JML

z931086@corn.cso.niu.edu

From boatanchors@theporch.com Tue Jan 30 08:18:23 1996  
From: MEC <danmec@inet.uni-c.dk>  
Subject: Re: WWII german tube ID help?  
Message-ID: <Pine.3.89.9601300844.A28304-0100000@inet.uni-c.dk>

> I found a WWII German vacuum tube that I'd like help  
> identifying. It does have the eagle and swastika marking,

The Nazis had swastikas even on the toiletpaper !!

> and is about 2" high with a top cap connection, and a  
> keyed bakelite base with 6 radial pins emanating from it.  
>

This is the normal German military tube.

There is probably a weak ID somewhere. try to breath on it and see if anything emerges.\

73 Rag OZ8R0

Collector of German WW2 Comm.gear.

From boatanchors@theporch.com Tue Jan 30 08:18:23 1996

From: Henry van Cleef <vancleef@bga.com>

Subject: Re: WWII german tube ID help?

Message-ID: <199601300851.CAA03286@zoom.bga.com>

As berg stephen erik said

>

> I traded a WWII German receiver to a list member a while back that used  
> these. It covered the range of 3 to 6 MCs, and had a 1 KC vernier dial,  
> 4 frequency presets, and a magnified main dial scale. It had only 1 tube  
> left in it. It was of the form mentioned in the preceeding post. It was  
> sort of an acorn tube design. I hate to say it but it sure looked more  
> sophisticated than our command sets.  
>

Well, that's not a surprising comment. A lot of German military iron  
\*was\* superior to US and British stuff. Galland may have told Goering  
that what he wanted was a squadron of Spitfires when he was pushing  
BF-109's, but the FW-190 may have been the best fighter in the war, in  
many respects. The ME-262 airframe was ten years ahead of anything the  
US or British built with turbine engines. Most of the US iron was  
"superior" only in terms of weight and quantity. 10,000 P-47's, 10,000  
P-51's, 10,000 C-47's, 10,000 each Stearman and Harvard trainers,  
10,000 P-39's and P-63's (mostly shipped to Russia)---the list goes  
on-and-on. If there had been 10,000 Dornier 335 "Anteaters" and petrol  
to support 90 gallon/hr operation at will (the fuel consumption of a  
C-47, by the way), I don't think there would have been too many Ford  
Liberators and B-17's sailing over Das Reich.



Of course, we should not ignore the proclivity of the Krauts to build one serious technical gaffe into each design and never do anything about it. I still remember working for a company that was investigating German non-resonant antenna designs for radar 14 years after the war was over to see what the Germans knew that we didn't. I think everybody finally agreed that they didn't know something. The FW-190 was notorious for overheating its BMW801 radial, and didn't turn into a reliable airplane until it was redone by Kurt Tank with an inline engine. The BF-109's were cursed with 100 gallon gas tanks (in a 45 gallon/hr airplane---the P-51 carried 269 gallons internal fuel for the same fuel burn), weak wing attach points, and a landing gear that was an accident about to happen.

--

\*\*\*\*\*  
Hank van Cleef vancleef@bga.com vancleef@tmn.com  
\*\*\*\*\*